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# CANADIAN PATENT

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SNOWMOBILE SKI SKEG

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No. OF CLAIMS

5

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# A B S T R A C T

A skey for snowmobile skis comprising a hardened tool steel bar having a diamond-shaped cross-section, bevelled upper and lower surfaces at each end for a double-taper at each said end, and an arcuate longitudinal configuration whereby the bevelled upper surfaces are coplanar for securement to the flat underside of a ski and the skey lower bearing surface is curved for improved steering control.

This invention relates to ski skegs and, in particular, is directed to snowmobile ski skegs.

Skegs and runners adapted for use in the underside bearing surfaces of snowmobile skis for providing directional control and stability to the skis are well known. For example, standard skegs are formed of rounded lengths of mild steel secured to the underside of the snowmobile skis. However, the soft round steel quickly abrades when travelled over stone and paved surfaces whereby the skegs quickly lose their bearing surfaces and consequently lose direction stabilizing characteristics on ice and the like hard surfaces.

It is also known to use skegs comprising lengths of steel having sharp insert strips of tungsten carbide seated in recesses formed in the steel to provide bearing and wear-resistant surfaces capable of travel over icy surfaces and over pavement, stone and the like abrasive surfaces. Tungsten carbide-containing skegs, however, are expensive to manufacture and are short-lived in useful life; the hard and brittle nature of the tungsten carbide resulting in frequent fracture and loss of insert sections necessitating costly repairs and replacement.

I have found that a ski skeg formed of hardened steel such as hardened tool steel having a substantially diamond shaped cross-section with an arcuate longitudinal configuration detachably secured to the underside of a snowmobile ski provides improved steering control and directional stability on hard surfaces such as icy surfaces while being resistant to abrasive wear due to travel over stone and paved surfaces.

It is a principal object of the present invention to provide an inexpensive ski skeg which can be quickly and readily attached to snowmobile skis or removed for sharpening if necessary.

It is another object of the present invention to



provide a ski skey which can be readily and inexpensively manufactured from conventional tool steel having wear resistant properties.

These and other objects of the invention and the manner in which they can be attained will become apparent from the following detailed description of the drawing, in which:

Figure 1 is a perspective view of the underside of a ski having the skey of the present invention secured thereto;

Figure 2 is a side elevation of the skey of the invention shown in Figure 1, with the ski partly cut away;

Figure 3 is a front end elevation of the skey of the present invention attached to a ski;

Figure 4 is a transverse section taken along the line 4 - 4 of Figure 2; and

Figure 5 is a transverse section taken along the line 5 - 5 of Figure 2.

The ski skey of the invention designated generally by numeral 10 has a substantially diamond-shaped cross-section, i.e. a substantially equilateral quadrilateral cross-section in the form of a rhombus or square with the diagonals in the vertical and horizontal planes, and is provided with an arcuate shape along its longitudinal axis as illustrated most clearly in Figure 2, whereby the central portion of the skey is spaced furthest from the undersurface 12 of ski 14. The uppermost surface of skey 10 is bevelled at each end of the skey, as shown most clearly in Figures 2 and 4, as designated by numeral 16, whereby a flat abutting surface engagement is made by the curved skey with the undersurface 12 of ski 14.

The undersurface of the skeg 10 at each end thereof is also bevelled, as shown most clearly in Figures 1 and 2, to provide flat tapered bearing surfaces 18, 20 at the front and rear ends of the skeg. There is thus provided an acute or substantially right-angled bearing edge 22 extending longitudinally of the skeg 10 from flat bearing surface 18 to flat bearing surface 20.

The skeg is connected at each end to ski 14 by securing means such as machine bolts 24, shown most clearly in Figure 4, passing downwardly from the upper surface 26 of ski 14 through holes 27 for threaded engagement in holes 28 in skeg 10.

The central portion of the skeg has stud 29 welded or brazed in a notch formed in the upper surface thereof for extension upwardly into and through opening 30 formed in the ski. A washer 32 positioned between the skeg and undersurface 12 of the ski provides the desired arcuate configuration of the skeg and nut 34 threaded onto stud 30 locks the central portion of the skeg to the ski.

In use, the skeg is secured to the undersurface of the ski, in the manner as has been described, to provide an effective sharp-edged and wear-resistant bearing surface for the ski on hard surfaces such as ice and stone or pavement while maintaining ease of pivotal movement and good steering control by means of the skeg curvature.

One embodiment of my invention comprised a 16 inch skeg formed of 7/16 inch square steel designated SPS 245 steel bar heat treated after fabrication to a hardness of Rockwell C53 to C56. The steel bar was positioned with a diagonal vertical and the upper surface bevelled 6 inches at each end at an angle of 2° 40' to the bar axis. The bar undersurface was bevelled 3.5 inches at each end at an angle of 4° to the bar axis.

The bar was then bent longitudinally to provide a curve having a radius of 42 inches such that the upper two bevelled surfaces were coplanar for securement to the flat underside of a ski by two bolts and a threaded central stud welded into a 1/2 inch notch formed in the upper edge of the skeg.

It will be understood, of course, that modifications can be made in the preferred embodiment of the present invention as described hereinabove without departing from the scope and purview of the appended claims.

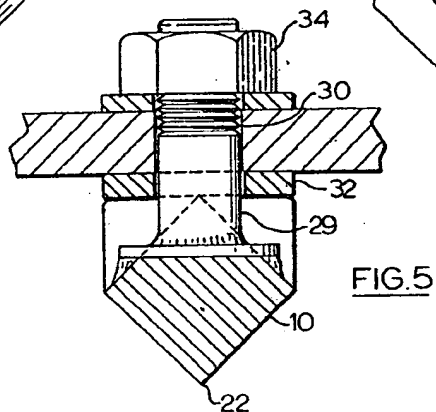
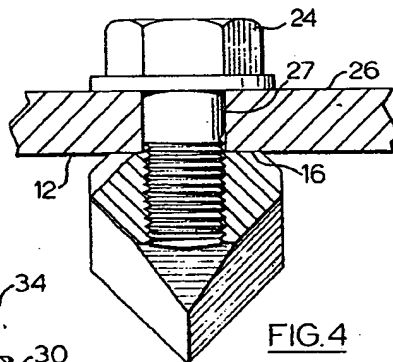
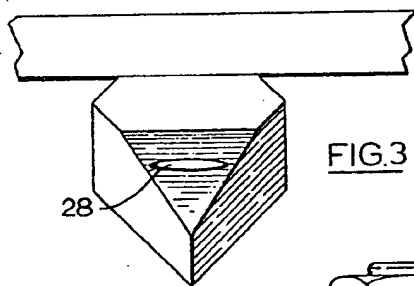
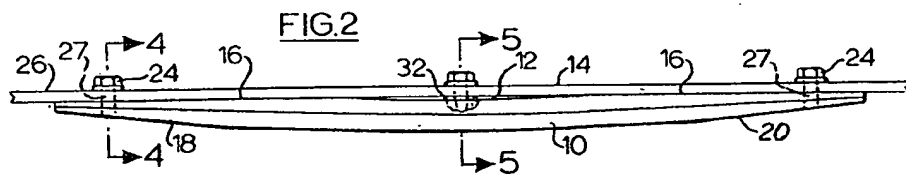
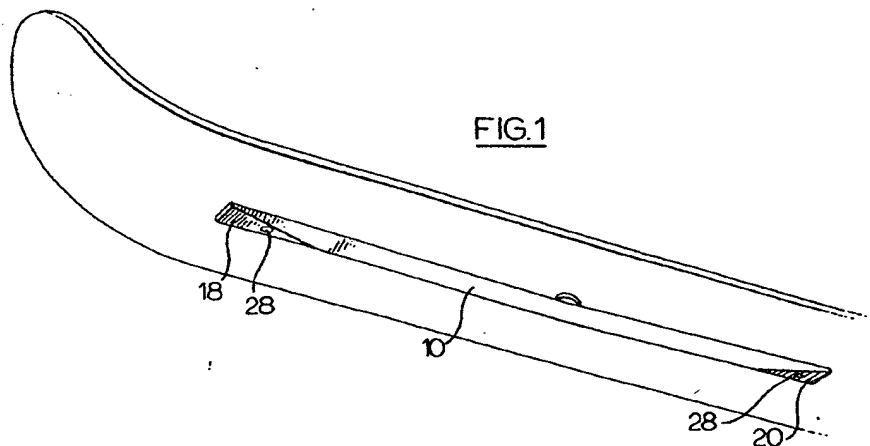
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The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A snowmobile ski skeg comprising an elongated member formed of a hard wear-resistant metal having a substantially equilateral quadrilateral cross-section in the form of a rhombus or square having the diagonals in the vertical and horizontal planes, the uppermost surface of said member being bevelled at each end to form flat taper surfaces, and said member bent longitudinally about a radius, whereby said flat taper surfaces are coplanar for abutment against a flat undersurface of a ski, and means for securing the skeg to the ski.
2. A snowmobile ski skeg as claimed in claim 1, in which said metal is a square bar of steel heat treated to a hardness of Rockwell C53 to C56.
3. A snowmobile ski skeg as claimed in claim 1, in which the undersurface of said member is bevelled at each end.
4. A snowmobile skeg as claimed in claims 1, 2 or 3, said securing means comprising bolts threaded into the skeg.
5. A snowmobile skeg as claimed in claims 1, 2 or 3, in which said skeg has a curved lower bearing surface for ease of pivotal movement and good steering control.



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